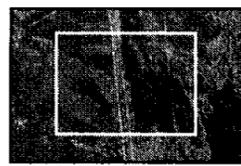




Close call reports spark SR&QA investigations of crosswalk safety. Story on Page 3.



Archeologists use space radar images from '94 missions to dig up ancient facts. Story on Page 4.

Space News Roundup

Vol. 35

April 26, 1996

No. 16



JSC Photo by Benny Benavides

EMERGENCY RESPONSE—Ellington Field firefighters rescue victims from a NASA T-38 during an aircraft mishap simulation held this week. The drill was conducted to help JSC, the City of Houston and the Air National Guard coordinate efforts in the case of an actual mishap.

Priroda module docks with Mir station today

By Kyle Herring

Cosmonauts aboard Russian's Mir Space Station will be busy today with the docking of the new Priroda science module.

Priroda or 'Nature,' launched at 6:48 a.m. CDT Tuesday, from the Baikonur Cosmodrome. Priroda will be used primarily to study the Earth for ecological and environmental purposes.

Cosmonaut Sergei Krikalev told the crew that some replanning will be done in anticipation of Priroda's arrival today. Batteries mounted inside the module used to provide electricity while en route to Mir will have to be disconnected and saved until the Progress resupply craft arrives in mid-May. The batteries will be stored inside Progress and disposed of when the craft undocks and burns up in the Earth's atmosphere. Space walks on May 6 and 8 will be rescheduled to allow for the battery removal from Priroda.

Meanwhile, a small internal leak in one of the two coolant loops which runs along the wall of the core module was detected early last week when a slight pressure decrease was noticed. The crew has spent some time looking for the leak with no success. The loop has been turned off and the alternate, or redundant loop, is being used. There is no health risk to the crew and the search has had little impact on science operations. The onboard condensate collector—used to remove humidity from the cabin atmosphere—is operating to prevent any chance of contaminating the drinking water.



The crew took time off the second weekend in April as Mir Commander Yuri Onufrienko, Flight Engineer-1 Yuri Usachev and Lucid celebrated Cosmonautics Day. The crew had the weekend off in celebration of the Orthodox Easter on Sunday. Family members, colleagues and guests talked to the crew

members during audio and video links to the station throughout the weekend and this week.

The crew completed work with the Optizon Liquid Phase Sintering Experiment. Sample processing has continued nearly every day with the crew processing metallurgical samples in vials heated in a high temperature furnace on Mir. Each vial contains 5 samples. OLIPSE processing was complete last weekend.

The Space Acceleration Measurement System is continuing to be strategically placed at various locations throughout the station to measure the slightest movements that can assist experimenters in correlating any changes noticed in data postflight. SAMS will be located in Priroda as well and a summary schedule has been laid out with Russian flight planners as to specific locations for the unit once the module arrives.

Periodic radiation measurements are being taken by the crew as routine. Please see **MIR**, Page 4

Crew completes launch test

By Linda Copley

Preparations for the launch of STS-77 aboard *Endeavour* continued this week as the crew and launch controllers completed a dress rehearsal of the launch countdown Wednesday.

The STS-77 crew—Commander John Casper, Pilot Curt Brown and Mission Specialists Andy Thomas, Dan Bursch, Mario Runco and Marc Gameau—flew to Kennedy Space Center Monday for the launch rehearsal, or Terminal Countdown Demonstration Test. Tuesday's activities included mission training and briefings, and opportunities for the commander and pilot to practice landings in the Shuttle Training Aircraft.

STS-77, NASA's 77th space shuttle mission and the fourth this year, is currently targeted for launch on May 16 at 5:32 a.m. CDT. An exact launch date will be determined at the Flight Readiness Review on May 7.

During the planned 10-day mission, astronauts will perform a total of four rendezvous operations with two research satellites—the most ever in a single space shuttle flight. The crew will deploy the SPARTAN-207 spacecraft with the Inflatable Antenna Experiment and

conduct station-keeping operations with a satellite called the PAMS/STU, which will investigate a new laser-based attitude system.

Endeavour will be carrying the SPACEHAB module containing a variety of experiments in addition to a dozen Get Away Special canisters mounted in the cargo bay, sponsored by investigators from the U.S., Canada and Europe.

Columbia is undergoing routine maintenance in preparation for the STS-78 flight, scheduled for launch June 20. Commander Tom Henricks, Pilot Kevin Kregel and crew members Susan Helms, Rick Linnehan, Chuck Brady, Jean-Jacques Favier and Bob Thirsk will conduct international research aboard the 16-day Life and Microgravity Spacelab mission.

Atlantis is being readied for the late July flight of STS-79, which is scheduled to rendezvous with the Russian Mir Space Station under Commander Bill Readdy. Cosmonaut Researcher Shannon Lucid will be picked up after almost five months aboard the Mir station, replaced by fellow Astronaut John Blaha who will serve a five-month tour of duty as a Mir crew member.



Aerospace Commission gets first-hand look at JSC

By Amy Kennedy-Reynolds

The Texas Aerospace Commission spent an entire day last month taking tours, receiving programmatic briefings and getting a first-hand look at what goes on at JSC.

The commission, comprised of nine advisory board members appointed by the Governor, is chartered with the responsibility to promote the aerospace industry across the state of Texas.

Commissioners who toured JSC included David Carr, the chairman, from Austin; Walt Cunningham of Houston; Bill Juett from Amarillo; Lee Kaplan of Houston; Ann McNamara from Dallas; Jim Royer of Houston; Bryon Sehke from Austin; T.C. Selman of Angleton; and Norman Webb of Midland.

TEXAS AEROSPACE COMMISSION



In meetings with JSC Director George Abbey, plans for several potential joint projects and ventures for the Aerospace Commission and JSC were discussed. As TAC

Chairman David Carr stated more than once, "the Texas Aerospace Commission is here to serve the Johnson Space Center and the aerospace community here in Texas. We want to do whatever possible to make this working relationship with JSC productive and beneficial for all those involved. We are here to help, and for us that means becoming extremely effective advocates for the U.S. space program, as well as the aviation industry. Please just let us know how we can help."

Please see **COMMISSION**, Page 4



JSC Photo by Mark Sowa

EARTH DAY—JSC employees check out the different displays in Teague Auditorium during the Earth Day celebration held Monday. The JSC celebration included 25-30 exhibits by local organizations and environmental agencies who provided information on ecological, environmental, recreational and other Earth friendly subjects.

MOD cohosts security conference

"Risk Management — Internet Gains and Losses," is the topic of the fourth annual Technology for Information Security Conference set for May 13-16 at the Marriott Hotel in Houston's Galleria area.

The Mission Operations Directorate and the Gulf Coast Chapter of the Information Systems Security Association will bring together security professionals, leaders in the use of security methods and tools, managers of private and federal information technology centers, experts in criminal justice and consultants on disaster recovery, intrusion detection and risk management for programs, panel discussions and workshops during the three-day conference.

Topics of this year's conference Please see **SECURITY**, Page 4

JSC

Ticket Window

The following discount tickets are available for purchase in the Bldg. 11 Exchange Store from 10 a.m.-2 p.m. Monday-Thursday and 9 a.m.-3 p.m. Friday. For more information, call x35350 or x30990.

Arena football: Texas Terror vs. Florida 7:30 p.m. at the Summit. Tickets cost \$11.50.

Houston International Festival: April 20-21 and April 27-28. Tickets cost \$2.25. Supersaver cost \$10.50 and includes admission for four days and free parking.

Casino trip: Players Island bus trip April 27. Tickets cost \$5.

Home tour: Galveston Historic Home Tour May 4-5 and May 11-12. Tickets cost \$13.50.

Concert: Bay Area Chorus presents "Music of the Americas," at 8 p.m. April 26 at the Bay Harbour United Methodist Church. Tickets cost \$8 for adults and \$5 for students and seniors.

Astroworld: One day pass cost \$17.25.

Fiesta Texas: One day pass cost \$17.25.

Six Flags: One day pass cost \$17.25.

Sea World: Adult tickets cost \$24.50, Children (3-11) cost \$17.25.

Space Center Houston: Discount tickets, adult, \$8.75; child (3-11), \$7.10.

Movie discounts: General Cinema, \$4.75; AMC Theater, \$4.50; Sony Loew's Theater, \$4.75.

Stamps: Book of 20, \$6.40.

JSC history: *Suddenly, Tomorrow Came: A History of the Johnson Space Center.* Cost is \$11.

Metro tickets: Passes, books and single tickets available.

Upcoming events: Caribbean Getaway Sept. 13-20. Cost is \$359. Deposit of \$200 due July 8. Mexico Cooper Canyon Trip Nov. 6-12. Cost is \$995. Deposit of \$200 due Sept. 6.

JSC

Gilruth Center News

EAA badges: Dependents and spouses may apply for photo identification badges from 7 a.m.-9 p.m. Monday-Friday; and 8 a.m.-4 p.m. Saturdays. Dependents must be between 16 and 23 years old.

Fitness Challenge: 1996 Fitness Challenge runs to Aug. 31. Employees are eligible to win \$100 gift certificates. For more information call Larry Wier at x30301.

Defensive driving: One day course is offered once a month. Cost is \$25. Interested employees should call the Gilruth.

Stamp club: Meets at 7 p.m. every 2nd and 4th Monday in Rm. 216.

Women's self defense: Martial Arts training for women only from 5-6 p.m. Tuesdays and Wednesdays. Cost is \$25 a month.

Weight safety: Required course for employees wishing to use the weight room is offered from 8-9:30 p.m. May 9. Pre-registration is required. Cost is \$5.

Exercise: Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays.

Aikido: Martial arts class meets from 6:15-7:15 p.m. Tuesday and Wednesday. Cost is \$25 per month. New classes begin first of each month.

Aerobics: Class meets from 5:15-6:15 p.m. Monday, Tuesday and Thursday. Cost is \$32 for eight weeks.

Ballroom dancing: Cost is \$60 per couple. For additional information call the Gilruth Center at x33345.

Country and Western dancing: Beginner class meets 7-8:30 p.m. Monday. Advance class meets 8:30-10 p.m. Monday. Cost is \$20 per couple.

Fitness program: Health Related Fitness Program includes a medical examination screening and a 12-week individually prescribed exercise program. For more information, call Larry Wier at x30301.

JSC

Swap Shop ads are accepted from current and retired NASA civil service employees and on-site contractor employees. Each ad must be submitted on a separate full-sized, revised JSC Form 1452. Deadline is 5 p.m. every Friday, two weeks before the desired date of publication. Ads may be run only once. Send ads to Roundup Swap Shop, Code AP2, or deliver them to the deposite box outside Rm. 181 in Bldg. 2. No phone or fax ads accepted.

Property

Sale: Condo, Friendswood, 3-2-2A, 1411 sq ft, FPL, deck, \$78k negotiable. 996-1863.

Sale: League City, Bayridge subdivision, cul-de-sac, new roof, \$55k make offer. James, 286-1934.

Rent: Dickinson, garage/workshop, 15'x20', \$100/mo; 15'x30', \$115 mo. Larry, x33168 or Carol, 393-2820.

Sale: Webster condo, 2-2-2CP, upstairs flat, new A/C, kitchen & bathroom upgrades, w/bp, W/D conn, \$37.5k. Pat, 488-2290.

Sale: Laporte/Creekmont, 3-2-2, FPL, new roof/carpet/linoleum/paint. \$63.9k. 992-5080.

Rent: Bay Glen, 3-2-2, shaded deck, close to elementary school/park/pool, \$1,180 mo + dep. Tom, x33651 or 280-8084.

Sale: Brook Forest, 4-2-2, 2300 sq ft, fence, new carpet/paint/tile, AC/H, \$135k. Brian, x32635 or 480-4351.

Lease: CLC, 1 BDR, security alarm, cov'd parking, W/D, FPL, clean, Jim Biley, 244-4632 or 488-7901.

Sale/Lease: Clear Lake condo, 2-1, W/D, pool, marina, \$600 mo, sale negotiable. Walt, 818-586-0797.

Sale: Clear Lake, Oakbrook West, 2-story, 4-2-5-2, pool w/jacuzzi, FPL, custom cabinetry, carpet allowance, warranty, \$121.9k. x38275 or 480-4634.

Sale: Taylor Lake Estates, wooded lot, 90' x 135', can finance, \$39.5k. Don, x38039 or 333-1751.

Rent: Middlebrook, 3-3-3, unfurn, fenced, \$900 mo, 1 mo advance, 1 yr lease avail 5/15. Don, 486-7092.

Rent: Arkansas cottage overlooking Blue Mt Lake & Mt Magazine, furn, stone FPL, wooded, \$50/day or \$250/weekly. Corcoran, x47806 or 334-7531.

Rent: Lake Travis cabin, private boat dock, cent A/C/H, fully equip, sleeps 8, spring/summer, \$550/\$650 weekly, \$120/daily. 474-4922.

Rent: Beach house, Crystal Beach, Galvanized County, sleeps 10, furn, cable TV, FPL, weekend/weekly. 486-1888.

Rent: Galveston condo, furn, sleeps 6, cable TV, weekend/weekly/daily rates. Magdi, 333-4760 or 486-0788.

Cars & Trucks

'76 Buick Regal, 2 dr, blue, 350 V8, 81.5k mi, good cond, \$1,150. Conner, x38193.

'82 Corvette Collectors Edition, 42k mi, show car cond, loaded, garaged, \$14,850. Larry, x30559.

'92 Chevy Lumina, Euro 3.4, black w/grey inter, all options, w/Delco Bose AM/FM/cass, alarm, 1 owner, garaged, ex cond, \$9.5k. Ron, x33196.

'92 Alfa Romeo VeLoce, silver, loaded, 5 spd, 23k mi, ex cond, \$14.5k nego. Wayne, 409-938-3408.

'90 Pontiac Sunbird convertible SE, auto, 4 cyl, tilt, cruise, A/C, AM/FM/cass, ex cond, 68k mi, \$8k

nego. K.D., x36228.

'91 Firebird, red, T-tops, loaded, ex cond, \$8,995. 337-1311 or 409-938-3491.

'86 Honda Prelude Si, sunroof, red/black, tinted windows, auto, good cond, \$3k. Lisa, x40213 or 554-4140.

'92 Honda Prelude, new body style, 5 spd, P/W, sunroof, sur-round sound, tinted, ex cond, \$12k obo. Wayman C. Randolph, x34194 or 692-0023.

'90 Nissan Stanza XE, pwr, A/C/H, new tires, auto, 81k mi, ex cond, \$5.5k. Linda, 283-0311 or 409-925-4862.

'78 Toyota Corolla, 43k mi, new tires/brakes/A/C, \$3.8k obo. 242-1946.

'84 Olds Cutlass, operates fine, rust, xmission rebuilt, \$1.5k. Bill, x32131 or 554-6242.

'91 Plymouth Grad Voyager LE, 3.3L/auto, pwr, dual A/C, premium sound system, captain seats, non-smoker, very good cond, \$8.6k firm. Larry or Viola, x31794 or 481-9058.

'79 Datsun 280 ZX Coupe, 5 spd, A/C, 97k mi. \$1.4k. 280-8608.

'85 Vandenplas Jaguar Sovereign, 4.2, gray, sunroof, clean, 66k mi, \$7.5k. 326-2633.

'75 HD FLH, fully restored, super clean, \$9k. Scott, x49854 or 282-9185.

'91 Ford Taurus SW-GL, new A/C/trans, clean, 76k mi, \$4.9k. 283-4230.

'89 Pontiac Sunbird LE, 4 dr, A/C, auto, AM/FM/cass, new brakes, \$3k obo. 332-5366.

'94 Honda Accord LX, 4 dr, green, alarm, ex cond, \$14.8k. x32634 or 480-2998.

Boats & Planes

Windsurfing equip, Mistral Challenge Flex, \$75; Bic Rap, \$375; Westwind, \$175, sails & extra equip. Dave, 486-8487.

'95 Kawasaki 750 SS Wave Runner, trailer, life vest, ex cond, \$4.8k. Rudy, 386-7702 or 283-9355.

Monark 14' alum V-bottom boat, 10Hp, Evinrude motor, Sportsman galvanized trailer, \$51.2k. 474-4325.

'88 Wilcraft Fisherman, 18" center console, 150 Johnson, marine radio, hummingbird depth finder, Sportsman trailer, ex cond, \$8.3k. Randy, x36364 or 488-6644.

'78 Johnson 35Hp outboard motor w/all controls, electric start, long shift. 480-3839.

Johnson outboard, 15Hp, tuned, new water pump, good cond, \$450. 282-3419 or 326-3711.

AUDIO Visual & Computers

486DX2-66, 8MB mini-tower, 14" SVGA, \$695; Compaq 386, 4MB 14" VGA, \$395; Pentium 75-100-133-166, 8MB/635, Win 3.11 or 95+Office, \$939-1039-1199-1479. Don, 333-1751.

CompuAdd 386 w/1.2MB 5.25" drive, 40MB HD, 14" Sansung CVGA monitor, mouse, misc S/W, Panasonic KPX-1124i (24-pin dot matrix printer), \$500 obo; IBM PCjr. w/expansion chassis, IBM color monitor, 640k RAM, 2-5.25" drives, \$100 obo. Richard, x31488.

Sony 27" Trinitron TV w/remote, \$400; DCM wood stereo spkrs, \$50 pr; Montgomery Ward 4 head VCR w/remote, \$105; Symphonic 3-head VCR w/remote, \$60; Panasonic 1124i dot matrix printer, \$100; contemporary entertain center, ex cond, 2'x4'x6', fits 30" TV, \$325. Gus, x33425 or 286-

JSC

Dates & Data

Today

Spring concert: The Bay Area Chorus presents "Music of the Americas," 8 p.m. April 26 at the United Methodist Church. Tickets are on sale at the Bldg. 11 Exchange Store. For more information call Irene Piatek at x39043.

Cafeteria menu: Special: baked chicken. Total Health: roast beef au jus. Entrees: deviled crab, baked chicken, beef cannelloni, steamed pollock, Reuben sandwich. Soup: seafood gumbo. Vegetables: seasoned carrots, peas, breaded okra, steamed cauliflower.

Monday

Cafeteria menu: Special: hamburger steak. Total Health: vegetable lasagna. Entrees: beef Burgundy over noodles, barbecue smoked link, vegetable lasagna, steamed fish, French dip sandwich. Soup: chicken and wild rice. Vegetables: buttered corn, steamed spinach, vegetable sticks, navy beans.

Tuesday

Cafeteria menu: Special: turkey and dressing. Total Health: roast turkey. Entrees: barbecue spare ribs, liver and onions, baked chicken, steamed fish French dip sandwich. Soup: black bean and rice. Vegetables: steamed broccoli, California vegetables, breaded squash, savory dressing.

Wednesday

Toastmasters meet: The Space-land Toastmasters will meet at 7 a.m. May 1 at the House of Prayer Lutheran Church. For more information call Jeannette Kirinich x45752.

Astronomers meet: The JSC Astronomy seminar will meet at noon May 1 in Bldg. 31, Rm. 129. An open discussion meeting is planned. For details call Al Jackson at x35037.

Cycle club: The Space City Cycle Club will meet for a 25-mile ride beginning at 6 p.m. May 1 at the University of Houston Clear Lake soccer field. For more information on this ride and weekend rides call Mike Prendergast at x45164.

Cafeteria menu: Special: Mexican dinner. Total Health: ground turkey tacos. Entrees: beef cannelloni, turkey tacos, steamed fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: peas and carrots, ranch beans, mustard greens, Spanish rice.

Thursday

Warning system test: The site-wide Employee Warning System will under go its monthly audio test at noon May 2. For more information call Bob Gaffney at x34249.

Cafeteria menu: Special: smothered steak. Total Health: steamed pollock. Entrees: chicken and dumplings, corned beef and cabbage, broccoli cheese quiche, steamed fish, French dip sandwich. Soup: navy bean soup. Vegetables: steamed cabbage, cauliflower au gratin, buttered carrots, lima beans.

Friday

Cafeteria menu: Special: baked meatloaf. Total Health: baked potato. Entrees: chicken fajitas, ham steak, pork and beef eggrolls, steamed fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: stewed tomatoes, seasoned spinach, cut corn, macaroni and cheese.

May 7

ABWA meets: The American Business Womens Association, Clear Lake Area Chapter will meet at 5:30 p.m. May 7 at Bay Oaks Country Club. For more information call Nancy Hutchins at x34006.

NMA class: The Texas Gulf Coast

Council of the National Management Association will host a 10-hour "Financial Strategies for Successful Retirement" seminar from 6-9 p.m. May 7, 14 and 21. Cost is \$50 per couple for members and \$75 for non-members. For details call 280-0444.

May 8

MAES meets: The Society of Mexican American Engineers and Scientists will meet at 11:30 a.m. May 8 in the Bldg. 3 Cafeteria executive dining room. For more information call Michael Ruiz at x38169.

PSI meets: The Clear Lake/NASA Chapter of Professional Secretaries International will meet at 5:30 p.m. May 8 at the Holiday Inn on NASA Road 1. For more information call Juanita Woodfox at 286-3346.

May 9

NPM meets: The National Property Management Association will meet at 5 p.m. May 9. For more information and meeting location call Marie-France Smith x39309.

Airplane club meets: The Radio Control Airplane Club will meet at 7:30 p.m. May 9 at the Clear Lake Park Community Bldg. For more information call Bill Langdoc at x35970.

May 10

Astronomers meet: The JSC Astronomical Society will meet at 7:30 p.m. May 10 at the Lunar & Planetary Institute 3600 Bay Area Blvd. For more information call Chuck Shaw at x35416.

May 15

Scuba club meets: The Lunarfins will meet at 7:30 p.m. May 15 at Redfish Restaurant under the Kemah/Seabrook Bridge, Seabrook Side. For more information call Fred Toole at x33201.

Swap Shop

3402. 386DX40, 170MB HD, 4MB RAM, 14" SVGA monitor, \$350; 486DX2-66, 8MB RAM, 420MB HD, 15" SVGA monitor, \$650; Pentium 90, 16MB RAM, 1GB HSD, 15" SVGA monitor, \$1k. Charles, x36422. Nokia carphone w/2-hr battery & charger, 100-number programmable memory, extra features, \$100 firm. x39034 or 474-1660.

Mode/fax/answer Macintosh, Prometheus Pro-Modem, 14,400, ext, ex cond, w/warranty card & assoc books, \$65. Doug, x48851 or 486-7412.

Star 2460C, 24 pin color dot matrix, \$100; Epson LX-800, 9 pin dot matrix, \$70; Marantz 4230 rcvr/tuner, \$65; 2-way floor speakers, \$100; Akai GX-356D reel to reel, \$100. 488-4318.

Pioneer stereo sys w/equal, 100 watt, dbl cass, turntable/cab, 2 tower spkrs, \$500 obo. K.D., x36228.

Bose 901 speakers, ex cond, new \$1.1k sell \$700. 379-3627.

486DX2-66, 540 MB HD, 3.5", 5.25" FD, 1MB VRAM, Soundblaster card, spkrs, keyboard, mouse, joystick, fax/modem, engr S/W, \$650/\$1050 w/15" 28DD monitor. Chris, 480-4101 or 333-5181.

White tile kitchen table, seats 4, pine trim, 2 chairs, ex cond, \$75 obo. x31057.

Stainless steel Jenn-Air cooktop w/4 burners, elect grill, needs wiring/fan motor/switch, \$150. 474-4747.

Want non-smoking roommate, 3-2-2 in LC, \$250 or \$325 for private bath/mo + 1/2 util. Rob, x41027 or 334-3529.

Want non-smoking roommate, to share 3-2-2, Bay Glen, CLC, \$335 mo + \$200 dep, 1/2 util. Larry, x33168 or 488-7460.

Want non-smoking roommate, 3-2-5 townhome in CL area, big-screen TV, W/D, all household privil, all bills pd, \$50 mo. John, x30543 or 286-7384.

Want '67-'76 Ford Bronco or FJ40 Toyota Landcruiser for restoration project. 282-0669.

Want ride to & from work, willing to pay gas expense, 7:30 a.m. - 4:00 p.m. x48871 or 472-5205.

Want babysitter for 8yr old, month of June. 486-4013.

Want your surplus epoxy resin & your non-working mower or edger. x31883.

Want space memorabilia for private collection, flown items, e.g. utensils, clothing, autographs on photos, covers, letters, relating to Mercury, Gemini, Apollo, Skylab, Shuttle, Richard, 481-8080.

Want low priced school/work car or truck, prefer Japanese. 271-7011.

Want jogging stroller, ex cond, need by June, will pay reasonable cost based on brand & features. Susan, x33523 or 334-5890.

Want children's water skies. 480-3839.

Want Nikon, Pentax, Canon cameras, lenses, accessories, all in working cond, to teach high school students, reasonable prices paid. Steve, x37152 or 992-7049.

Want personnel to join VPSI vanpool departing Meyerland Park & Ride, 7:05 a.m. for JSC, 8 a.m.-4:30 p.m. x35346.

Want non-smoking roommate, 3-2-2 in LC, \$250 or \$325 for private bath/mo + 1/2 util. Rob, x41027 or 334-3529.

Want non-smoking roommate, to share 3-2-2, Bay Glen, CLC, \$335 mo + \$200 dep, 1/2 util. Larry, x33168 or 488-7460.

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Safety is No Accident

April 1996

Motor vehicle safety campaign set for May

A publication of NASA's Johnson Space Center for Employees' Safety and Health

Crosswalk near miss brings back haunting memories

By Rindy Carmichael

Even the most attentive and conscientious driver may suffer a brief moment of distraction, but it only takes a moment to hit—or avoid hitting—a pedestrian, as George Jarrell recently learned.

Jarrell, the shuttle orbiter project Safety Reliability and Quality Assurance manager, was returning from lunch on March 21, driving below the posted 25 mph speed limit. Keeping attuned to red lights, signs and potential pedestrians, he made his way back to Bldg. 45.

"I was particularly cautious when I came to the crosswalk between Bldgs. 17 and 15," he said. "I have personally seen a lot of near misses

due to pedestrians who appear to be walking along the sidewalk, only to make what seems like an immediate left into the crosswalk that many drivers aren't prepared for. I am always attentive while driving; I believe that is my job at the time. However, that day, something happened to me I can't explain."

In the less than 100 yards it took to get to the next crosswalk, Jarrell said, his mind wandered to a problem his team had just solved on STS-76, allowing for its safe launch. In that split second, he missed seeing a woman already in the crosswalk. If it had not been for her quick reaction, he is convinced he would have hit her.

"Something in my mind clicked and I saw her, but by the time I put on my brakes it was too late—I was past the crosswalk. Fortunately, she had seen I wasn't going to stop in time and

jumped back out of the way," he continued. "I remembered reading an article in the safety page that instructed the driver and pedestrian to make eye contact, so I did. I know she was frightened."

Jarrell explained why he never thought this would happen to him. "Early in my career, I had a very emotional experience related to a crosswalk that still haunts me. I worked for Boeing and our chief engineer for the test center was an older gentleman, very brilliant, but centrally focused. He would get his mind on one thought and not be aware of anything else. One particular afternoon I was on top of Bldg. 420 performing some quality work when I looked into the street and noticed a meat packing truck barreling down the road around 50 mph. I saw the engineer walk right in front of the truck with the truck blowing his horn. He was killed on impact, after being

thrown about 60 feet into the air. I was one of the first people to reach him. I'll never forget what I witnessed."

"What happened today scared me. It scared me because if it can happen to me, it can happen to anyone," Jarrell said. "There was no distraction, no reason at all, not to have seen that pedestrian. I hope by sharing my story, I may help save someone from really getting hurt."

Jarrell said his experience reminded him that pedestrian safety is a two-way street. Both drivers and pedestrians must be vigilant when they are in or near a crosswalk.

"We feel, as a pedestrian, we are protected on site—but that is not always the case," Jarrell concluded. "Drivers are not always going to see a sign or a person, no matter how much attention they think they pay. I'm living proof."

Smokers urged to take care

Smoldering stubs blamed for rash of outdoor fires

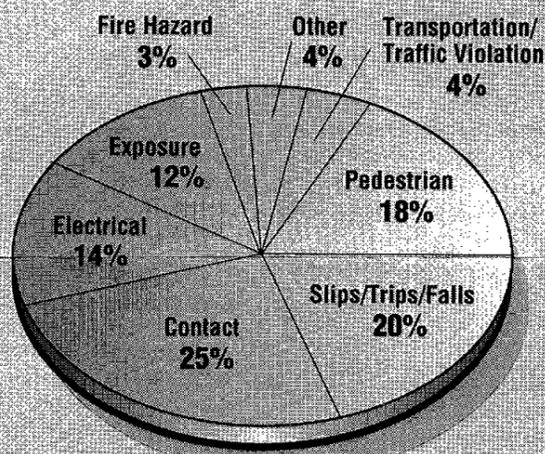
A recent upsurge of fires on site has resulted from the improper disposal of smoking materials such as cigars, cigarettes, and matches by employees and visitors, according to JSC fire prevention officials.

Incorrect disposal of a cigarette was suspected as the cause of a Jan. 9 fire that erupted in a trash can outside Bldg. 48. On March 26, outside Bldg. 9A, an unextinguished cigarette butt was the cause of another fire in some landscaping mulch. A discarded match caused the April 5 fire in the street gutter outside the Second St. gate. An accumulation of cigarette butts in that area indicated individuals are carelessly discarding them from vehicles before entering the gate.

"Smokers should remember the criticality of the site," said Fire Protection Maintenance and Operations Lead John Dee. "Operations could be jeopardized if an initial fire spread to one of our structures. It is important to make sure all cigarette butts and matches are completely extinguished before discarding to prevent serious mishap and, more importantly, to prevent personal injury."

For information regarding new or extra smoking receptacles for their building contact Cindy Ratliff, x33208.

FY95 JSC Close Call Trends



Slips/Trips/Falls	Includes slips; trips; people falling to floor level, falling from a roof or upper level.
Contact	Includes people being struck by moving objects or coming into contact with stationary objects.
Electrical	Includes unsafe overhead power lines, power tools and cords, outlets, temporary wiring.
Exposure	Includes biohazards, chemicals, harmful vapors, dusts, or uninhabitable environment.
Fire Hazard	Self explanatory.
Transportation/Traffic Violation	Includes drivers or vehicle passengers involved in close calls or not abiding traffic laws.
Other	Includes processes not followed, processes not in place.
Pedestrian	Includes people involved in close calls at crosswalks, parking lots or traffic areas.

Four actions aid crosswalk safety

Four immediate actions could help solve JSC's rising crosswalk incident problem, according to a panel of JSC workers experienced in crosswalk hazards that studied the problem for six months.

Close Call Reports of pedestrian and contact categories are much higher than the national average and have spawned investigation and corrective actions.

Chairman Dick Snyder of the Mission Operations Directorate said the committee's recommendations include:

- ◆ Installing a pedestrian-activated traffic light and extending the median on the corner of Avenue B and Fifth St.;
- ◆ Creating a Pedestrian Close Call Report;
- ◆ Creating Pedestrian Zones, similar to School Zones, on Second St. between Bldgs. 17 and 47, and on Fifth St. near Bldgs. 4, 5, 35 and T-585; and
- ◆ Deleting parking spots and adding signs or lights in the Beta Link area, Avenue D at Bldg. 2 area and Avenue B in the Bldg. 300-400 areas.

Safety, Reliability and Quality Assurance Director Charlie Harlan said he expects all of the recommendations to be adopted by JSC management.

Many more changes are envisioned across the center, he said. It is important for employees to be alert so that the changes can be recognized and the appropriate action taken. Efforts to improve the attentiveness of every individual who crosses a JSC street, also will be stepped up.

"The modification messages may sound much like when your mother told

you to look both ways before crossing the street, but we need to remember to take responsibility for our own safety," Snyder said. "The center can help us by implementing structural changes—but it is ultimately up to each one of us change our own attitudes."

JSC workers who participated in the study included John Byard, Johnson Controls World Services; Gary Jackson, Health, Safety, and Environmental Compliance Office; Carl Poindexter, Mason and Hanger; L.D. Stevenson, Barrios, Nathan Vassberg, and Margie Wood, Krug.

"I recruited individuals for this team who had a vested interest to become part of the 'solution'," Snyder said. "Individuals who had submitted close call reports were not only allowed, but were encouraged to actively participate."

The team tried to function as an advocate for JSC workers, both as pedestrians and drivers, and not be influenced by previous studies and evaluations.

Pedestrian Close Call reports are above the national average, but other reports of close calls at JSC are closer to the national average.

Slips/trips/falls were about average, and electrical close calls are slightly higher than average. The Close Call reporting system has become a leading indicator of hazardous conditions and undesirable trends at JSC. For fiscal year 1996, 206 reports have been submitted. This record response averages more than 41 reports a month, and is spurring increased emphasis to investigate trends above the national average.

Safety Home Page now available

Page features library of safety information

The JSC Safety Home Page is up and running with a variety of easy-to-use information.

The page is on the World Wide Web segment of the Internet at the address <http://www.jsc.nasa.gov/jsc/safety/>

"The Home Page will eventually become a one-stop resource for safety information at JSC," said Larry Neu, chairman of the Communications and Employee Ownership subcommittee of the Executive Safety Committee. "We wanted to get something on line as soon as possible and let the users tell

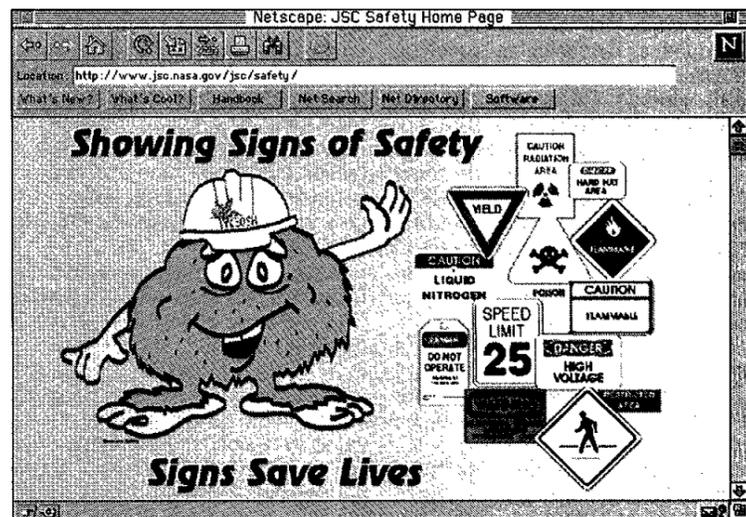
us what should be implemented next. We will prioritize these inputs and, as time and staffing permit, will add as we go along."

The Safety Home Page features an extensive library of safety information resources, including Safety Alerts, previous Space News Roundup Safety Pages, the JSC Safety Manual, and a listing of various subject matter experts. A list of future attractions also has been included.

A prominent Safety Home Page addition is a flash alert displaying

JSC's on-site emergency phone number, x33333. Links to other safety reference locations include the home pages of the Occupational Safety and Health Administration and the National Institute of Occupational Safety and Health.

Future plans for the Safety Home Page call for inclusion of safety-related event schedules. Other additions will include listings of hot-line responses and Close Calls. To request additional features, contact Mark Klebig at x33546.



Space radar reveals ancient segments of China's great wall

Scientists in China are using space radar images to locate and study two generations of the Great Wall of China that have been eroded and buried in places by centuries of blowing sand.

"In the images, we can recognize two different dynasties that built the Great Wall. One was built in the Ming Dynasty and is about 600 years old. The other was built during the Sui Dynasty and is more than 1,000 years old," said Guo Huadong, a SIR-C/X-SAR science team member from the Institute of Remote Sensing Applications at the Chinese Academy of Sciences in Beijing.

The radar images were taken by the Spaceborne Imaging Radar C/X-band Synthetic Aperture Radar, or SIR-C/X-SAR, that flew on *Endeavour* in April and October of 1994.

The Great Wall is one of several archeological sites around the world being studied through the use of the space radar images. Other sites include Angkor, Cambodia, the Lost City of Ubar in Oman and the Silk Road along the desert of northwestern China.

"Archeology wasn't one of our original science objectives, but the imaging radar data has been found to be very useful for this type of research. It's an exciting spin-off," said Diane Evans, the SIR-C project scientist at NASA's Jet Propulsion Laboratory.

The Great Wall of China dates back to the Third Century B.C., when it was built to protect the country from northern invaders. The wall, which spans more than 1,860 miles, has been periodically rebuilt and modified throughout history by each reigning dynasty.

The scientists are studying a segment of

the wall about 430 miles west of Beijing in a remote region of the north-central China desert. The most recent version of the wall was built by the Ming Dynasty during the 14th century and it is clearly visible both on the ground and in the radar data. An older version, built during the Sui Dynasty, runs parallel to the present wall.

"Part of the wall is visible on the surface, but part of it is buried by the strong winds that blow sand dunes across this part of the desert," Guo said. "In this region the wall was made out of loose soil and mud, not bricks or rocks. Usually you cannot find these segments even if you go there, so the radar data are helping to show us the whole wall."

"Using radar to look at archeological structures has been very powerful because

the radar is sensitive to vertical structures, such as walls. Even if they are highly eroded, like these segments of the Great Wall, the radar is able to capture a reflection off it and the wall shows up quite clearly in the radar image," said Jeffrey Plaut, the SIR-C experiment scientist at JPL. "This is a part of the world where we can also take advantage of the radar's ability to penetrate through layers of dry sand to image buried structures. The multiple channels of the SIR-C/X-SAR system increases our ability to detect different kinds of structures that a single-channel radar system would not see."

Radar images of the Great Wall at various resolutions are available over the Internet on the JPL SIR-C/X-SAR home page at the following URL:

<http://www.jpl.nasa.gov/sircxsar/>

Employees honored at launch

Thirty JSC civil service and contractor employees watched the March 22 launch of STS-76 at Kennedy Space Center as recipients of the Space Flight Awareness Award.

The honorees also received a VIP tour of KSC and attended a reception held to recognize their dedication to quality work. Astronaut Tom Jones presented all the honorees with framed certificates and pins.

Civil service honorees were: Greg Aber, Wayne Jermstad, Roger Schwarz and Danny Siner of the Engineering Directorate; Mirella Barron of Flight Crew Operations Directorate; Barbara Conte, Lynda Gavin, Jeff Hanley, Mi-Mi Lau and John Stumpf of the Mission Operations Directorate; Stella James of the Safety Reliability and Quality Assurance Directorate; Jennifer Mason-Korecki and Sharon Thomas of the Space Station Program Office; Cindy Neal of the Office of the Comptroller; and Diana Norman of the Space and Life Sciences Directorate.

Contractor honorees were: Jim Martin, Nigel Packham, Nate Pemberton and Jim Warnix of Lockheed Martin Engineering and Science Services; Mario Cage and Judy Hardin of Loral Space Information Systems; Michael Adkins of Brown and Root Services; Marilyn Brooks of Boeing Aerospace Operations; Tom Johnson of Hughes Training; Frances Jones of Johnson Engineering; Joe Kramer of Hamilton Standard Management Services; Ken Lambert of Allied Signal Technical Services-WSTF; Steve Murphy of Centennial Contractors Enterprises; Brenda Rouse of Kelsey-Seybold Clinic; and David Wyckoff of DynCorp Johnson Support Division.

Correction

The April 19 issue of the Space News Roundup incorrectly identified Stacey Morrison in the photo on page 4 as a Legal Office employee. Morrison works in the Office of the Chief Information Officer.

Commission to promote space

(Continued from page 1)

During its visit to JSC, the Texas Aerospace Commission received detailed briefings on the status of the JSC Human Resources, budget, space shuttle and space station programs, and technology spin-offs. They also toured and received "hands-on" demonstrations of JSC's work in virtual reality and robotics, telemedicine, and the bioreactor, along with walk-throughs of both Mission Control Centers and the shuttle and station mock-ups.

All commissioners commented on the overwhelming sense of pride and accomplishment they felt about the U.S. space program after concluding their day at JSC.

The primary focus of the commissioners is the promotion of economic development initiatives with the



JSC Photo by Benny Benavides
WOMEN IN FLIGHT—Women's Air Force Service Pilot, or WASP, Mildred "Hut" Ferree, left, talks with Yvonne Cagle a JSC flight surgeon during the Women's History Month observance held last month at the Gilruth Center. Both pilots were featured speakers during the program that highlighted the evolution and diversity of female pilots over the past 50 years.

Hatch act briefings set for Monday

The Legal Office will host briefings on April 29 to explain changes in the law regarding employee participation in political activities.

Briefings that focus on the 1993 Reform Amendments to the Hatch Act will be held from 11 a.m.-noon and 1-2 p.m. Monday in the Bldg. 30 auditorium.

On Oct. 6, 1993, President Clinton signed the Hatch Act Reform Amendments of 1993. The amendments became effective on Feb. 3,

1994, and the Office of Personnel Management subsequently published regulations in September 1994. The amendments relaxed prior restrictions on most JSC employees regarding active participation in partisan political activities.

In addition, employees who have not fulfilled their ethics training requirement for this year may do so by attending this briefing. For more information call the Legal Office at x31004.

Security workshops available

(Continued from page 1)

include security engineering, law and policy, risk management, security concepts and technology. Featured speakers will focus on topics such as firewalls, computer incident investigations, Unix and Windows security, intrusion detection and antivirus technology.

In addition to the conference, eight workshops will be conducted on May 13, covering Investigative Techniques, Secure Internet Commerce, Windows NT Security, Client-Server

Security, Unix Security, Firewalls, Corporate Information Protection and Disaster Recovery.

Vendors will be on hand to display the latest information on security tools and processes. More than 90 public, private and educational institutions will participate in the three-day conference.

JSC civil service employees may attend the conference by submitting a JSC Form 75 to Glen Van Zandt at Mail Code AH3. For more information call Van Zandt at x35266.

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Editor Kelly Humphries
Managing Editor Karen Schmidt
Contributing Editor Rindy Carmichael

NEBA rep on hand to answer questions

During the month of April the NASA Employees Benefit Association representative, Carl Arnold, will be available to JSC employees to answer questions about existing and new policies.

Arnold will set up shop every Wednesday morning throughout the month of April in Bldg. 45 Rm. 140 to sign up new employees and answer questions from existing policy holders.

"NEBA is a not-for-profit organization that is self funded and provides low cost life insurance to civil servants," said Mike Stewart, chapter president at JSC.

"NEBA has over 1,200 JSC employees currently enrolled and in the last three years alone, NEBA has paid almost 1.6 million dollars to beneficiaries of JSC employees and provided rebates of premiums amounting to more than \$79,000."

Stewart noted that NEBA offers most of the same benefits as the Federal Employees Group Life Insurance plus employees receive more insurance coverage for less money during years they are normally raising a family. Employees also receive free coverage for dependent children from the ages of 14 days to 19 years and the better the NEBA plan performs—the lower rates become.

Stewart added that rates are set by NASA employees based upon industry standards using the NASA workforce claims experience rather than the governmentwide workforce profile. In the fall of 1995, most NEBA rates were reduced based upon the excellent overall plan experience and employees

have received periodic premium rebates based upon plan performance. Twice in the past four years, rebates ranging from \$8 to \$170 have been given to each NEBA enrollee.

"Payments are made easily and automatically through biweekly payroll deduction," Stewart said. "Based upon salary, employees may obtain up to five times the life insurance coverage for a spouse that is available under FEGLI and at less cost."

In addition, under the Accelerated Life Insurance provision, employees may receive a portion of benefits while guaranteeing that the majority of benefits will be paid to beneficiaries and like FEGLI, employees receive twice the amount of basic coverage with Accidental Death and Dismemberment, Stewart said.

If qualified, employees may receive non-smoker rates under the Optional Life Insurance plan and Inexpensive travel insurance is available through payroll deduction. Stewart noted that like FEGLI, NEBA basic life insurance covers flight crews participating in shuttle and aircraft missions and employees have guaranteed conversion privileges upon separation from NASA. Dependent children enjoy a guaranteed insurability option at age 19—offering up to \$25,000 in coverage regardless of their health or occupation he added.

Employees may sign up for NEBA insurance at any time and those who seek more information may visit Arnold on Wednesdays in Bldg. 45 or call Employee Services at x33087.

Mir crew talks training

(Continued from page 1)

tine work throughout the flight. The dosimeter is moved throughout the station to gather radiation data at various locations.

The crew reported that it has fixed the body mass measuring device, or BMMD, used to calculate the crew members body mass throughout the flight. The unit broke earlier in the mission and is now operating fine. Other biomedical experiments, including blood work is considered an almost daily task for the crew.

The Mir-22 and Mir-24 crew members talked to their colleagues currently on the station about their recent training activities at JSC and future trips to Mir.

Cosmonauts Gennady Manakov, Pavel Vinogradov and French Astronaut Claudie Andre-Deshays—the next crew to launch to the station in July—visited with the Mir-21 crew on a two-way video link as part of the Cosmonautics Day celebration. Mir-24 crew members Valery Korzun and Alexander Kaleri, talked to the current Mir crew last Thursday. The Mir-23 and Mir-25 crews remain in the U.S., undergoing training on space shuttle systems.

At the Gagarin Cosmonaut Training Center in Star City, NASA astronauts continue to prepare for future

stays aboard Mir, training along with cosmonauts colleagues. The next astronaut to stay on Mir, John Blaha, returned from the U.S. April 14 following completion of his last science training session at JSC. This week he continued training on Mir systems and trained on medical countermeasures procedures he will utilize on orbit. Blaha will launch aboard *Atlantis* and replace Lucid in August.

Jerry Linenger and Mike Foale, who will follow Blaha, were in the U.S. for training and returned to Star City last weekend. Astronaut Jim Voss remains in Russia undergoing language training and familiarization training at Star City.

Wendy Lawrence, NASA director of operations in Russia, has completed her second week after having taken over for Charlie Precourt, who recently returned to the U.S. to begin training as commander of the sixth mission of *Atlantis* to dock with Mir—STS-84. In addition to overseeing astronaut training activities at Star City, she also is taking Russian language classes several times a week.

Today is Onufrienko and Usachev's 63rd day aboard Mir since being launched Feb. 21. Lucid joined the crew during *Atlantis*' STS-76 mission and has been a member of the Mir-21 crew for 35 days.